DECISION
AND
FINDING OF NO SIGNIFICANT IMPACT
for
ENVIRONMENTAL ASSESSMENT FOR REDUCING AQUATIC RODENT DAMAGE THROUGH AN INTEGRATED WILDLIFE DAMAGE MANAGEMENT PROGRAM IN THE STATE OF ALABAMA

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service, Wildlife Services (APHIS-WS) program responds to requests for assistance from individuals, organizations and agencies experiencing damage caused by wildlife. WS is the Federal program authorized by law to reduce damage caused by wildlife (Act of 1931, as amended (46 Stat. 1486; 7 U.S.C. 426-426c) and the Rural Development, Agriculture, and Related Agencies Appropriations Act of 1988, Public Law 100-102, Dec. 27, 1987. Stat. 1329-1331 (7 U.S.C. 426c), and the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act of 2001, Public Law 106-387, October 28, 2000. Stat. 1549 (Sec 767). Wildlife damage management is the alleviation of damage or other problems caused by or related to the presence of wildlife, and is recognized as an integral part of wildlife management (The Wildlife Society 1992). WS uses an Integrated Wildlife Damage Management (IWDM) approach, commonly known as Integrated Pest Management (WS Directive 2.105) in which a combination of methods may be used or recommended to reduce damage. WS wildlife damage management is not based on punishing offending animals but as one means of reducing damage and is used as part of the WS Decision Model (Slate et al. 1992, USDA 1997, WS Directive 2.201). Resource management agencies, organizations, associations, groups, and individuals have requested WS to conduct aquatic rodent damage management (ARDM) to protect resources and human health and safety in Alabama. All WS wildlife damage management activities are in compliance with relevant laws, regulations, policies, orders and procedures, including the Endangered Species Act of 1973.

Ordinarily, according to APHIS procedures implementing the National Environmental Policy Act (NEPA), individual wildlife damage management actions may be categorically excluded (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). To evaluate and determine if any potentially significant impacts to the human environment from WS' planned and proposed ARDM program would occur, an environmental assessment (EA) was prepared. The EA evaluates and supports a decision regarding the reduction of beaver (*Castor canadensis*), nutria (*Myocastor coypus*) and muskrat (*Ondatra zibethica*) damage to property, agricultural and natural resources, and threats to public health and safety in the state of Alabama. Based upon information and analysis provided in the EA, a Decision/Finding of No Significant Impact (FONSI) was issued in May 2002. Comments from the public involvement process were reviewed for substantive issues and alternatives which were considered in developing this decision.

Upon review of the EA, WS has determined the need to re-analyze specific portions of the EA based upon an increase in requests for ARDM services and the availability of new information. To

evaluate the potential environmental effects of the ARDM program in Alabama, WS has decided to prepare a new Decision/FONSI. The purpose of this Decision/FONSI is to facilitate planning, interagency coordination, and the streamlining of program management; and to clearly communicate with the public the analysis of individual and cumulative impacts of the WS ARDM program.

Based on the analysis in the EA, the 2002 Decision/FONSI and this new Decision/FONSI, I have determined that there will not be a significant impact, individually or cumulatively, on the quality of the human environment as a result of the proposed action.

Summary of WS Beaver, Nutria and Muskrat Damage Management Activities from 2002 through 2003

WS maintains a Management Information System (MIS) database to document assistance that the agency provides in addressing wildlife damage conflicts. MIS data is limited to information that is collected from people who have requested services or information from Wildlife Services. It does not include requests received or responded to by local, State or other Federal agencies, and it is not a complete database for all wildlife damage occurrences. The number of requests for assistance to WS does not necessarily reflect the extent of need for action, but this data does provide an indication that a needs exists.

The WS database includes, but is not limited to, the following information: species of wildlife involved, the number of individuals involved in a damage situation; tools and methods used or recommended to alleviate the conflict; and the resource that is in need of protection. Table 1 provides a summary of ARDM Technical Assistance projects completed by the Alabama WS program for Fiscal Years (FY) 2002-2003 by resource category. A description of the WS Direct Control (Operational Damage Management Assistance) and Technical Assistance programs is contained in Chapter 3 of the EA.

Table 1*. Annual number of incidents for technical assistance involving beaver, nutria and muskrat for Alabama Wildlife Services during FY 2002-2003.

Fiscal Year	Aquaculture	Human Health and Safety	Property	Natural Resources
2002	18	0	25	0
2003	11	1	22	1
Total	29	1	47	1

*Data presented in this table represent the number of technical assistance projects conducted by the Alabama WS program and do not include data from operational projects conducted during the time period covered

Affected Environment

The ARDM program would continue to be implemented as described in Chapter 2 of the EA.

Site Specificity

The EA analyzes the potential impacts of WS' ARDM activities and addresses activities on all lands in Alabama under MOU, Cooperative Agreement and in cooperation with the appropriate public land management agencies. It also addresses the impacts of ARDM activities on areas where additional agreements may be signed in the future. Because the proposed action is to reduce damage and because the program's goals and directives are to provide services when requested, within the constraints of available funding and workforce, it is conceivable that additional ARDM efforts could occur. Thus, this EA anticipates this potential expansion and analyzes the impacts of such efforts as part of the program.

Planning for the management of aquatic rodent damage must be viewed as being conceptually similar to federal or other agency actions whose missions are to stop or prevent adverse consequences from anticipated future events for which the actual sites and locations where they will occur are unknown but could be anywhere in a defined geographic area. Examples of such agencies and programs include fire and police departments, emergency clean-up organizations, insurance companies, etc. Although some of the sites where aquatic rodent damage will occur can be predicted, all specific locations or times where such damage will occur in any given year cannot be predicted. The EA emphasizes major issues as they relate to specific areas whenever possible, however, many issues apply wherever aquatic rodent damage and resulting management occurs, and are treated as such. The standard WS Decision Model (Slate et al. 1992) would be the site-specific procedure for individual actions conducted by WS in Alabama (*see* Chapter 3 of the EA for a description of the Decision Model and its application).

The analyses in the EA is intended to apply to any action that may occur *in any locale* and at *any time* within the analysis area. In this way, APHIS-WS believes it meets the intent of NEPA with regard to site-specific analysis and that this is the only practical way for WS to comply with NEPA and still be able to accomplish its mission.

National Historic Preservation Act of 1966, as Amended

The National Historic Preservation Act (NHPA) of 1966, and its implementing regulations (36 CFR 800), requires federal agencies to: 1) determine whether activities they propose constitute "undertakings" that has the potential to cause effects on historic properties and, 2) if so, to evaluate the effects of such undertakings on such historic resources and consult with the Advisory Council on Historic Preservation (i.e. State Historic Preservation Office, Tribal Historic Preservation Officers), as appropriate. WS actions on tribal lands are only conducted at the tribe's request and under signed agreement; thus, the tribes have control over any potential conflict with cultural resources on tribal properties.

Each of the ARDM methods described in the EA that might be used operationally by WS do not cause major ground disturbance, do not cause any physical destruction or damage to property, do not cause any alterations of property, wildlife habitat, or landscapes, and do not involve the sale, lease, or transfer of ownership of any property. In general, such methods also do not have the potential to introduce visual, atmospheric, or audible elements to areas in which they are used that

could result in effects on the character or use of historic properties. Therefore, the methods that would be used by WS under the proposed action are not generally the types of activities that would have the potential to affect historic properties. If an individual activity with the potential to affect historic resources is planned under an alternative selected as a result of a decision on this EA, then site-specific consultation as required by Section 106 of the NHPA would be conducted as necessary.

There is potential for audible effects on the use and enjoyment of a historic property when methods such as firearms, explosives or other noise-making methods are used at or in close proximity to such sites. However, such methods would only be used at a historic site at the request of the owner or manager of the site to resolve a damage or nuisance problem, which means such use would be to benefit the historic property. A built-in mitigating factor for this issue is that virtually all of the methods involved would only have temporary effects on the audible nature of a site and can be ended at any time to restore the audible qualities of such sites to their original condition with no further adverse effects. Site-specific consultation as required by Section 106 of the NHPA would be conducted as necessary in those types of situations.

Public Involvement

As part of this process, and as required by the Council on Environmental Quality (CEQ) and APHIS-NEPA implementing regulations, the EA and its Decision documents are being made available to the public through "Notices of Availability" (NOA) published in local media and through direct mailings of NOA to parties that have specifically requested to be notified. New issues or alternatives raised after publication of public notices will be fully considered to determine whether the EA and its Decision should be revisited and, if appropriate, revised.

Monitoring

The Alabama WS program will annually provide to the Alabama Department of Conservation and Natural Resources (ADCNR) WS lethal take of target and non-target animals to help ensure the total statewide take (WS and other take) does not impact the viability of target and non target wildlife species. In addition, the EA will be reviewed each year to ensure that it and the analysis are sufficient.

Alternatives Analyzed in Detail

Alternatives were developed for consideration using the WS Decision Model (Slate et al. 1992) as described in Chapter 2 (pages 20-35), Appendix J (Methods of Control), Appendix N (Examples of WS Decision Model), and Appendix P (Risk Assessment of Wildlife Damage Control Methods Used by USDA, Wildlife Services Program) of the ADC FEIS (USDA 1997). A complete description of the Alternatives is provided in Chapter 3 of the EA.

Alternative 1 - No Federal WS Beaver, Nutria, and Muskrat Damage Management in Alabama. This Alternative would result in no assistance from WS in reducing beaver, nutria, or muskrat

damage in Alabama. WS would not provide technical assistance or operational damage management services.

Alternative 2 - Technical Assistance Only. Under this Alternative, WS would not conduct operational beaver, nutria, or muskrat damage management in Alabama. The entire program would consist of providing technical assistance only.

Alternative 3 - Non-lethal Beaver, Nutria, and Muskrat Damage Management Only. Under this Alternative, only non-lethal operational damage management and technical assistance would be provided by WS.

Alternative 4 - Integrated Beaver, Nutria, and Muskrat Damage Management for all Public and Private Land (No Action/Proposed Action). This Alternative is the Proposed Action and is the preferred Alternative of WS. This Alternative incorporates an integrated approach to beaver, nutria, and muskrat damage management using components of the wildlife damage management techniques and methods addressed in Alternatives 2, 3, and 5 as deemed appropriate by WS and other participating entities in Alabama.

Alternative 5 - Lethal Beaver, Nutria, and Muskrat Damage Management Only. This Alternative would involve the use and recommendation of lethal management techniques only by WS.

Major Issues

The following seven issues were analyzed in detail in the EA. A complete description of the issues is provided in Chapter 2 of the EA.

1. Effects on beaver, nutria and muskrat populations.
2. Effects on plants and other wildlife species, including Threatened and Endangered (T&E) species.
3. Effects on public and pet health and safety.
4. Humaneness of methods to be used.
5. Effects on wetlands.
6. Economic losses to property.
7. Impacts to stakeholders, including aesthetics.

Methods to be Used and Recommended by WS

Aquatic rodent damage management methods that may be used or recommended have not changed and remain as described in Chapter 3 and Appendix D of the EA.

Environmental Consequences - Analysis of Potential Impacts

The following are the anticipated environmental impacts from WS continued implementation of the Proposed Action Alternative (Alternative 4). Potential impacts of the other 4 Alternatives

(Alternatives 1, 2, 3, and 5) have not changed and remain as analyzed in Chapter 4 of the EA.

Effects on beaver, nutria, and muskrat populations. The EA predicted that WS would lethally remove no more than 1,000 beavers, 100 nutria and 100 muskrats each year. Since the completion of the the EA in 2002, WS ARDM program has expanded to the point that program activities are exceeding the lethal take of 1,000 beaver on an annual basis. WS lethal take of nutria and muskrat remain within the predicted level of take.

In FY02, the WS program in Alabama killed 645 beaver, 2 nutria and 5 muskrat. In FY03, the WS program in Alabama killed 1,417 beaver, 14 nutria and 25 muskrats. As stated in the EA, the ADCNR, the agency with authority for management of resident wildlife species in Alabama, concurred that WS activities would not adversely impact beaver, nutria, or muskrat populations in the state. The ADCNR has determined that there is no evidence to suggest that human mediated mortality resulting from regulated fur harvest and damage management, including removal by WS, will be detrimental to the survival of the beaver, nutria, or muskrat populations in the state of Alabama (letter from K. Guyse, ADCNR to F. Boyd, USDA, APHIS, Wildlife Services, February 28, 2002).

The following is a population impact analysis for the three species of aquatic rodents addressed in the EA.

Beaver Population Information and Impact Analysis. Beaver occur mostly in family groups that are comprised of 2 adult parents with 2-6 offspring from the current or previous breeding season (Novak 1987). Average family group size has been documented as ranging from 3.0 to 9.2 beaver (Novak 1987). Beaver abundance has been reported in terms of families/kilometer of stream or families/square kilometer of habitat. Novak (1987) summarized reported beaver family abundance as ranging from 0.31 to 1.5 families/kilometer of stream, which converts to 0.5 - 2.4 families/mile of stream. Densities reported in terms of families/square kilometer have been reported to range from 0.15 to 3.9 (Novak 1987) which is the same as 0.24 to 6.3 families/square mile. Additionally, Novak (1987) indicates rates of beaver populations are density dependent, which means rates of increase generally increase as a population is reduced and decrease as a population reaches carrying capacity[1]. This is a natural function of most wildlife populations which helps to naturally mitigate population reductions. Studies have reported that beaver fecundity may be density dependent and that lower densities may cause an increase in litter size (Novak 1987). However, density and dispersal are also reported as a function of many factors such as habitat (water quality, drought conditions, and food), mortality (trapping, predation, and disease), and behavior (territorial activities and intrafamily aggression) (Aleksiuk 1970 as cited in Novak 1987, Tyurnin 1983 as cited in Novak 1987, Novak 1987). Logan et al. (1996) indicated that wildlife populations being held at a level below carrying capacity can sustain a higher level of harvest because of the compensatory mechanisms that cause higher rates of increase in such populations.

[1]Carrying capacity is maximum number of animals the environment can sustain and is determined by food availability, water, cover, and tolerance of crowding by the particular species.

No population estimates were available for beavers in Alabama. Therefore the best available information was used to estimate statewide populations. There are over 2.7 million acres of wetlands in Alabama (Hefner et al. 1994) including an estimated minimum of 77,000 miles of streams and rivers (USEPA 1998). Using the conservative estimate of 3 beavers per family group and an abundance of 0.5 families per stream mile provided by Novak (1987), the minimum statewide beaver population estimate for Alabama could be estimated at 115,500 beavers. The ADCNR, the state authority responsible for monitoring and managing beavers in Alabama, report that the statewide beaver population is stable or increasing (letter from K. Guyse, ADCNR to F. Boyd, USDA, APHIS, Wildlife Services, February 28, 2002). Recognizing that beaver are in abundance and cause damages to resources in Alabama, the ADCNR has established a year-round season for beaver with an unlimited harvest.

As reported by mandatory take sheets issued to private trappers by the ADCNR, the private harvest of beaver for the 2002-2003 harvest season in Alabama was 650 beaver, (M. Sievering, ADCNR, 2004). Based upon current and anticipated increase in future work, it is anticipated that no more than 5,000 beaver would be killed annually by WS in Alabama. The ADC final EIS (USDA 1997) determined that beaver populations can withstand an annual harvest rate of up to 30% without declining. The cumulative total kill of beavers (WS take of 1,417 beavers + private harvest of 650 beavers) has been less than 2% of the estimated statewide population in any one year. Based upon an anticipated annual kill of no more than 5,000 beavers by WS, the cumulative take appears to be far beneath the level that would begin to cause a decline in the population. WS does not anticipate the annual total statewide lethal take of beaver to exceed 30% of the statewide population. The cumulative impact on the beaver population is therefore considered to be of extremely low magnitude.

Based upon harvest data, ADCNR oversight and the above information the limited lethal take of beaver by WS should have minimal effects on the beaver population in Alabama.

Muskrat Population Information and Impact Analysis. Muskrats are considered abundant in Alabama and scattered in suitable habitat throughout the State. Muskrats can be found in marshes, ponds, sloughs, lakes, ditches, streams, and rivers (Boutin and Birkenholz 1987). As described by Perry (1982), muskrat populations are cyclic with muskrats themselves greatly influencing their habitat and its carrying capacity. Population density varies widely and depends upon such factors as phase of population cycle, habitat type and condition, social pressures, competition, harvest, predation, and geographical area (Perry 1982). Muskrats are highly prolific and produce 3-4 litters/year and average 5-8 young/litter (Wade and Ramsey 1986) which are characteristics that make them relatively immune to over harvest (Boutin and Birkenholz 1987). Harvest rates of 3-8/acre have been reported to be sustainable in muskrat populations (Boutin and Birkenholz 1987). Muskrat home ranges have been shown to vary from 529 sq. ft to 11,970 sq. ft. (0.1 to 0.25 acres) with the size of home ranges occupied by muskrats depends on habitat quality and population density (Boutin and Birkenholz 1987).

No population estimates were available for muskrat in Alabama. Therefore the best available

information was used to estimate statewide populations. There are over 2.7 million acres of wetlands in Alabama (Hefner et al. 1994) including an estimated minimum of 77,000 miles of streams and rivers (USEPA 1998). Using the assumption that 50% of the wetlands support a muskrat population, an average home range of 0.25 acres per muskrat, only 1 muskrat occupies a home range, and no home ranges overlap, a conservative statewide muskrat population could be estimated at over 5.4 million muskrats. The ADCNR, the state authority responsible for monitoring and managing muskrats in Alabama, report that the statewide muskrat population is stable or increasing (letter from K. Guyse, ADCNR to F. Boyd, USDA, APHIS, Wildlife Services, February 28, 2002).

As reported by the ADCNR, the private harvest of muskrats for the 2002-2003 harvest season in Alabama was 2,928 muskrats (M. Sievering, ADCNR, 2004). Based upon current and anticipated increase in future work, it is anticipated that no more than 500 muskrats would be killed annually by WS in Alabama. The ADC final EIS (USDA 1997) determined using qualitative information (population trend indicators and harvest data) that if WS muskrat kill is less than or equal to 33% of the total harvest, the magnitude is considered low. Magnitude is defined as a measure of the number of animals killed in relation to their abundance. Using harvest data and the annual take of 500 muskrat by WS, the magnitude is considered low for WS lethal take of muskrat in Alabama.

Based upon harvest data, ADCNR oversight and the above information the limited lethal take of muskrat by WS should have minimal effects on the muskrat population in Alabama.

Nutria Population Information and Impact Analysis. Nutria are native to Central and South America and became established in the United States after releases in the 1930's and 1940's. Establishment was hoped to promote nutria and subsequent "fur ranching." These introductions and promotion of nutria for fur ranching was a failure. Nutria are distributed throughout the entire state of Alabama, in surface water streams, rivers, reservoirs, wetlands, and coastal marsh, with slightly higher populations in the southern half of the state due to the milder winter temperatures. Densities of about 18 nutria per acre have been found in floating freshwater marshes (LeBlanc, 1994).

No current population estimates were available for nutria in Alabama. Therefore the best available information was used to estimate statewide populations. There are over 2.7 million acres of wetlands in Alabama (Hefner et al. 1994). Using the assumption that 25% of the wetlands support a nutria population and an average density of 10 nutria per acre, a conservative statewide nutria population could be estimated at over 6.7 million nutria. The ADCNR, the state authority responsible for monitoring and managing nutria in Alabama, report that the statewide nutria population is stable or increasing (letter from K. Guyse, ADCNR to F. Boyd, USDA, APHIS, Wildlife Services, February 28, 2002).

As reported by the ADCNR, the private harvest of nutria for the 2002-2003 harvest season in Alabama was 84 nutria (M. Sievering, ADCNR, 2004). Due to extremely low fur prices, the majority of fur trappers do not target nutria in the state (M. Sievering, ADCNR, 2004). Based upon current and anticipated increase in future work, it is anticipated that no more than 500 nutria

would be killed annually by WS in Alabama. The ADC final EIS (USDA 1997) determined using qualitative information (population trend indicators and harvest data) that if WS nutria kill is greater than 66% of the total harvest and the population is stable to increasing, the magnitude is considered moderate. Magnitude is defined as a measure of the number of animals killed in relation to their abundance. Using harvest data and the annual take of 500 nutria by WS, the magnitude is considered moderate for WS lethal take of nutria in Alabama.

Based upon harvest data, ADCNR oversight and the above information the limited lethal take of nutria by WS should have minimal effects on the nutria population in Alabama.

Effects on plants and other wildlife species, including T&E species. The EA concluded that WS ARDM activities would not adversely affect any non-target wildlife species, including T&E species. Program activities and their potential impacts on non-target species have not changed from those analyzed in the EA.

In 2002, 3 otters, 14 raccoons, and 22 turtles were unintentionally killed by WS beaver traps. In 2003, 6 otters, 7 raccoons, and 21 turtles were unintentionally killed by WS beaver traps. The 3 non-target otters that were killed by WS in 2002 and the 6 non-target otters killed in 2003 represented only 1.6% and 3.2%, respectively, of the 184 otters that were legally harvested and tagged by trappers during the regulated 2002-2003 trapping season in Alabama (M. Sievering, ADCNR, 2004). As stated in the EA, WS concluded that the cumulative impact on non-target species is biologically insignificant to nonexistent and that WS has not adversely affected the viability of any wildlife species populations though beaver, nutria, or muskrat control activities. The ADCNR has concurred that WS ARDM program will not adversely affect non-target species, or species listed in the Alabama Threatened and Endangered Species Inventory (letter from K. Guyse, ADCNR to F. Boyd, USDA, APHIS, Wildlife Services, February 28, 2002).

A review of T&E species listed by the U.S. Fish and Wildlife Service showed that no additional listings of T&E species in Alabama have occurred since the completion of the EA in 2002. Program activities and methods have not changed from those analyzed in the EA. Thus, WS's determination of not likely to adversely affect is still valid and appropriate for the proposed action.

Effects on public and pet health and safety. WS implementation of the program activities has not resulted in any adverse impacts to human or pet health and safety. Program activities and methods and their potential impacts on human health and safety have not changed from those analyzed in the EA.

Humaneness of methods to be used. WS personnel are experienced and professional in their use of management methods, and methods are applied as humanely as possible. Program activities and their potential impacts on humaneness have not changed from those analyzed in the EA.

Effects on wetlands. Beaver dams in Alabama are removed by hand or with explosives with the purpose of returning streams, channels, dikes, culverts, and irrigation canals to their original channel. Dams are removed in accordance with provisions of the Clean Water Act. Most dams

that WS breaches are created as a result of recent beaver activity because WS receives most requests for assistance soon after damage is discovered. These sites do not possess wetland characteristics or the same wildlife habitat values as wetlands. Therefore, WS beaver damage management activities are not negatively affecting wetlands and do not have a significant impact because sites are generally being returned to an original condition. Program activities and their potential impacts on wetlands have not changed from those analyzed in the EA.

Economic losses to property. Program activities and their potential impacts on economic impacts to property have not changed from those analyzed in the EA. In FY02 and FY03 the Alabama WS ARDM program received requests for assistance to reduce aquatic rodent damage valued at $226,500 and $3,301,800 each year, respectively.

Impacts to stakeholders, including aesthetics. The EA concluded the effects on aesthetics would be variable, depending on the damage situation, stakeholder's values towards wildlife, and their compassion for those who are experiencing damage from aquatic rodents. Overall, however, impacts would be insignificant. The ability to view and enjoy the aesthetic value of beaver, nutria or muskrats at a particular site would be somewhat limited if the animals were removed. However, new beaver, nutria or muskrats would most likely use the site in the future, although the length of time until they arrive is variable, depending on the site, time of year, and population densities in the surrounding areas. The opportunity to view beaver, nutria and muskrat is available if a person makes the effort to visit sites outside of the damage management area. Program activities and methods and their potential impacts to stakeholders and aesthetics have not changed from those analyzed in the EA.

Other Issues

In addition to the issues analyzed above, eight other issues were considered but not in detail. WS has reviewed the "issues not considered in detail" as described in the EA and has determined that the analysis provided in the EA has not changed and is still appropriate.

Cumulative Impacts

Cumulative impacts, as defined by CEQ (40 CFR 1508.7), are impacts to the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts may result from individually minor, but collectively significant, actions taking place over time.

Under Alternatives 2, 3, 4 and 5, WS would address damage associated with aquatic rodents in a number of situations throughout the State. The WS ARDM program would be the primary federal program with ARDM responsibilities; however, some state and local government agencies may conduct ARDM activities in Alabama as well. Through ongoing coordination with these agencies, WS is aware of such activities and may provide technical assistance in such efforts. WS does not normally conduct direct damage management activities concurrently with such agencies in the

same area, but may conduct management activities at adjacent sites within the same time frame. In addition, commercial pest control companies may conduct ARDM activities in the same area. The potential cumulative impacts analyzed below could occur either as a result of WS ARDM program activities over time, or as a result of the aggregate effects of those activities combined with the activities of other agencies and individuals.

Cumulative Impacts on Wildlife Populations

Aquatic rodent damage management methods used or recommended by the WS program will likely have no cumulative adverse effects on target and non-target wildlife populations. WS limited lethal take of beaver, nutria and muskrats is anticipated to have minimal impacts on overall populations in the State. When control actions are implemented by WS the potential lethal take of non-target wildlife species is expected to be minimal to non-existent.

Cumulative Impact Potential from Chemical Components

Aquatic rodent damage management programs which include the use of pesticides as a lethal population management component may have the greatest potential for cumulative impacts on the environment as such impacts relate to deposit of chemical residues in the physical environment and environmental toxicosis. The toxicant Zinc Phosphide could be used by the WS program for the purpose of obtaining lethal effects on nutria and muskrat. This chemical has been evaluated for possible residual effects which might occur from buildup of the chemicals in soil, water, or other environmental sites. Based on use patterns, the chemical and physical characteristics, and factors related to the environmental fate of this pesticides, no cumulative impacts are expected from WS use of Zinc Phosphide.

Cumulative Impact Potential from Non-chemical Components

Non-chemical methods used or recommended by WS may include exclusion through use of various barriers, habitat modification, trapping, snaring, and shooting. No cumulative impacts from WS use of these methods to take animals are expected, since take would be authorized and/or permitted with ADCNR oversight.

Summary

No significant cumulative environmental impacts are expected from any of the Alternatives. With regard to Alternatives 2 and 3, Lethal Removal Only and the Proposed Action, respectively, the lethal removal of beaver, nutria, and muskrats by WS would have no adverse affect on beaver, nutria, or muskrat populations in Alabama. No adverse risk to public or pet health and safety is expected from control methods implemented by WS under Alternatives 2, 3, and 5. However, some persons would likely oppose lethal removal of beaver, nutria, and muskrats under any circumstance. Analyses in the EA, the 2002 Decision/FONSI and this new Decision/FONSI indicate that such removals would result in no significant cumulative adverse impacts on the quality of the human environment.

Finding of No Significant Impact

The analysis in the EA, the 2002 Decision/FONSI and this Decision/FONSI indicates that there will not be a significant impact, individually or cumulatively, on the quality of the human

environment as a result of this proposed action. I agree with this conclusion and therefore find that an EIS need not be prepared. This determination is based on the following factors:

1. Aquatic rodent damage management as conducted by WS in Alabama is not regional or national in scope.

2. The proposed action would pose minimal risk to public health and safety. Risks to the public from WS methods were determined to be low in a formal risk assessment (USDA 1997, Appendix P).

3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. Built-in mitigation measures that are part of WS's standard operating procedures and adherence to laws and regulations will further ensure that WS activities do not harm the environment.

4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to wildlife damage management, this action is not highly controversial in terms of size, nature, or effect.

5. Based on the analysis documented in the EA and the accompanying administrative file, the effects of the proposed damage management program on the human environment would not be significant. The effects of the proposed activities are not highly uncertain and do not involve unique or unknown risks.

6. The proposed action would not establish a precedent for any future action with significant effects.

7. No significant cumulative effects were identified through this assessment. The number of beaver, nutria and muskrats killed by WS, when added to the total known other take of these species, would fall within allowable harvest levels supported by the ADCNR. The EA and associated Decision documents discussed cumulative effects of WS on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within the State.

8. The proposed activities would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources.

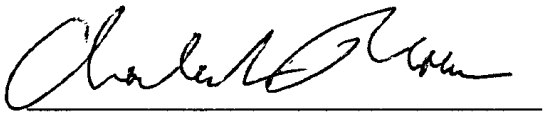
9. WS has determined that the proposed program would not adversely affect any Federal or Alabama State listed threatened or endangered species. This determination is based upon concurrence from the USFWS and the ADCNR that the program will not likely adversely affect any threatened or endangered species in Alabama.

10. The proposed action would be in compliance with all federal, state, and local laws.

Decision and Rationale

I have carefully reviewed the EA, input resulting from the public involvement process, and this Decision/FONSI. I believe that the issues identified in the EA are best addressed by selecting Alternative 4 - Integrated Beaver, Nutria, and Muskrat Damage Management for all Public and Private Land (No Action/Proposed Action) and applying the associated mitigation measures discussed in Chapter 3 of the EA. Alternative 4 is selected because (1) it offers the greatest chance at maximizing effectiveness and benefits to resource owners and managers while minimizing cumulative impacts on the quality of the human environment that might result from the program's effect on target and non-target species populations; (2) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and, (3) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of these issues are considered. This Decision/FONSI will take effect 30 days after publication in accordance with APHIS-NEPA implementing regulations making this Decision/FONSI available to the public for review and comment. New issues or alternatives raised after publication of public notices will be fully considered to determine whether the EA and its Decision should be revisited and, if appropriate, revised, or if a Notice of Intent to prepare an EIS should be issued.

Copies of the EA and associated Decision/FONSIs are available upon request from the Alabama Wildlife Services Office, Room 118, Extension Hall, Auburn University, Alabama 36849-5656.



8/11/04

Charles S. Brown, Regional Director
APHIS-WS Eastern Region

Date

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